

Claims

1. A multilayer film comprising the following sequence of layers:

5

- A) a base layer of polyolefin foam containing 0.5 to 25 wt.%, relative to the total weight of the base layer, of at least one nucleating agent,
- B) a layer based on at least one polyolefin of the foam layer A)
- C) optionally a bonding layer based on a polyolefin,
- D) optionally a coupling agent layer,
- E) optionally a gas- and/or aroma-barrier layer,
- F) a coupling agent layer,
- G) an optionally heat-sealable and/or peelable surface layer

10

15

20

wherein the total thickness of layers A) and B) is in the range from 0.5 to 2 mm and the thickness of layer B) is in the range from $\frac{1}{6}$ to $\frac{1}{2}$ of the thickness of layer A).

2. A multilayer film according to claim 1, characterised in that the total thickness of layers A) and B) is in the range from 0.6 to 1.4 mm.

25

3. A multilayer film according to claim 1 or claim 2, characterised in that the thickness of layer B) is in the range from $\frac{1}{6}$ to $\frac{1}{3}$ of the thickness of layer A).

30

4. A multilayer film according to one or more of claims 1 to 3, characterised in that layer A) is based on foamed polypropylene or a foamed blend of

- 15 -

polypropylene with long-chain branching and a propylene-ethylene copolymer, preferably a heterophase propylene-ethylene block copolymer.

- 5 5. A multilayer film according to at least one of claims 1 to 4, characterised in that layer A) contains 2.1 to 20 wt.%, preferably 2.5 to 15 wt.% of the nucleating agent.
- 10 6. A multilayer film according to at least one of claims 1 to 5, characterised in that at least one agent from the group talcum, titanium dioxide, silicon oxide, calcium carbonate, magnesium silicate, aluminium silicate, calcium phosphate and montmorillonite is
15 present as the nucleating agent.
7. A multilayer film according to one or more of claims 1 to 6, characterised in that layer B) is based on polypropylene or a propylene-ethylene copolymer.
- 20 8. A multilayer film according to one or more of claims 1 to 7, characterised in that layer C) is based on a polyolefin, which is based on the particular monomer which is the main monomer of the polyolefin of the
25 foam layer A), preferably on polypropylene.
9. A multilayer film according to one or more of claims 1 to 8, characterised in that layer E) is based on an ethylene-vinyl alcohol copolymer.
- 30 10. A multilayer film according to one or more of claims 1 to 9, characterised in that layer G) is based on a

- 16 -

heat-sealable polymer, preferably on a low density polyethylene or an ionomer and optionally contains conventional additives.

- 5 11. A multilayer film according to one or more of claims 1 to 9, characterised in that layer G) is based on peelable polymers, preferably on a blend of low density polyethylene and a polybutylene and optionally contains conventional additives.
- 10 12. A multilayer film according to one or more of claims 1 to 11, characterised in that the total thickness of layers C) to G) amounts to 20 to 70 μm , preferably to 30 to 50 μm .
- 15 13. Use of a multilayer film according to one or more of claims 1 to 12 as a packaging material.
- 20 14. Packaging containers, preferably packaging trays, made from a film according to at least one of claims 1 to 12.
- 25 15. Packaging containers according to claim 14 for packaging foodstuffs, preferably solid foodstuffs.
- 30 16. Packaging containers according to claim 15 for packaging meat, sausage or cheese.
17. Use of a multilayer film according to one or more of claims 1 to 12 as a packaging material on form-fill-seal machines.